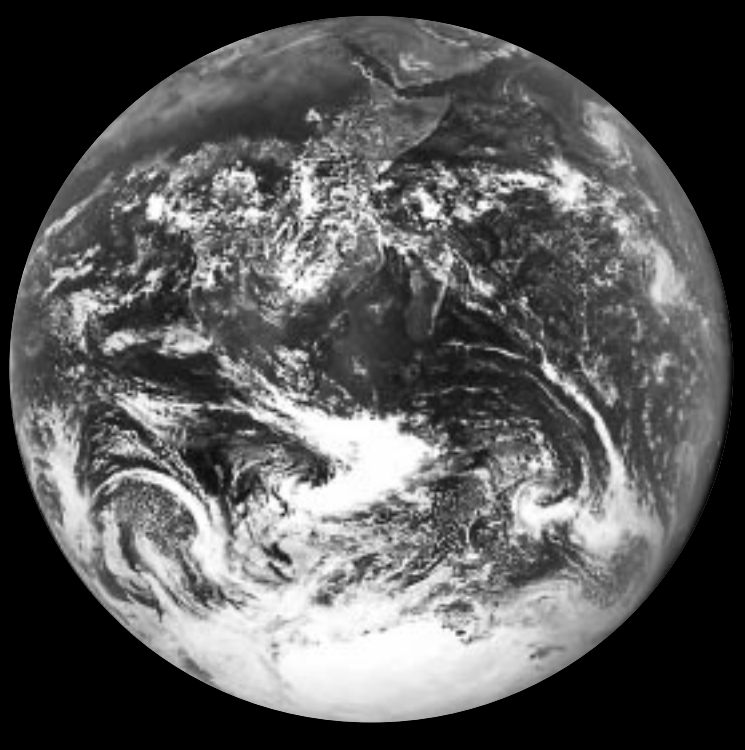
Silver Moon

'The President reached out to the 21st Century, grabbed a decade of time, slipped it into the '60s and '70s, and called it Apollo'



By Kelly Humphries

TWENTY-FIVE YEARS AGO TODAY, humans returned from another planet for the last time in this millennium. They brought with them 110 kilograms of lunar material, 2,100 photographs and 22.1 hours of experience scouring the Taurus-Littrow basin for answers to questions almost as old as the human race.

And yet, what the men and women of the Apollo Program set out to learn about the Moon may not have been as important as what they ended up learning about themselves. Or maybe, it's what the world has forgotten about what they learned.

"We were exploring, going to the moon. No one guaranteed what I'd find. No one guaranteed that it would be worthwhile. No one guaranteed that I'd get home," says Gene Cernan, Apollo 17 commander and the last human to leave a footprint on the lunar surface. "But we examined the rewards, the worth of our risks, managed our risks, got as smart as we possibly could, and worked hard to get smarter, and committed ourselves to doing something we believed in and everything it took to support that commitment.

"We had a few tragedies. We killed a few people along the way," Cernan admits. "But look at the reward to mankind. We probably never will—none of us alive today—will fully appreciate the significance of what we've done in the 20th Century in terms of space exploration. Did mankind fully appreciate the significance of what Columbus did when he sailed across the Atlantic within the first 25 years after he did it? Hell no. Was it a hundred years or 200 years? I believe it is going to take that hundred years before we realize and appreciate the significance of those first steps we took out of the cradle and truly ventured into outer space, truly went beyond the gravitational pull of this place we call home, planet Earth, and were literally detached from one planet and captured by another. That's almost science fiction, but we did it, it happened. We didn't just live through it, we worked through it. How important is that? Give me a call in a hundred years and we'll probably have a better idea."

Cernan, now chairman of the board for NASA contractor Johnson Engineering, says perspective may have been the most important piece of data with which he returned.

"Orange soil, scientific experiments, walking on the moon, none of them compare," he says. "I'm going to repeat a quote that I won't claim, but that one of us or some of us along the way made: 'We went to explore the moon, but in fact we discovered the Earth.' By far, orange soils, rocks, volcano origin of the moon—they're scientifically and philosophically important as well. But there's nothing that can replace, from a memory point of view, the overwhelming inspiration and feeling one gets, number one when he's standing a quarter of a million miles away and looking back at this Earth, and then place yourself physically on another planet. You're physically in somewhat of a static position on another planet, standing in sunlight looking at the Earth surrounded by the blackest black you can conceive in your mind.

"That is indeed in our Earthly language a paradox, but in space and on the moon it is truth. That blackness goes on forever, I call it the infinity of space and the infinity of time and the Earth is three-dimensionally within that blackness. Other than the color you bring with you to the moon, it's the only color. And it's blackness, not darkness. Darkness is the absence of light. Blackness is something out there, it's the blackness that's the endlessness of space and time and it is something that does exist. I know it exists because I saw it with my own eyes. Our Earth moves with such purpose and such logic and such beauty through that blackness it is incomprehensible. It's just too beautiful to have happened by accident."

For the first scientist to fly in America's space program, it was much the same. Harrison "Jack" Schmitt, Apollo 17 pilot astronaut and geologist, also subjugates his operational and scientific observations and investigations on the Moon to the grander, philosophical stirrings that arose within.

"When you come down that ladder you're facing the lunar module," Schmitt says. "You're facing primarily objects that are extraordinarily familiar to you. Everything you've seen of the moon has been out the window. Even for the next 10, 15 maybe even 30 minutes of work around the lunar module, you haven't had a chance to step away from it all and see it in context. I think the first time there was an emotional high, if you will, or plateau, was when I moved away from the lunar module about 75 meters to take the first panorama that included the lunar module and the total scene of the valley of Taurus-Littrow. It was at that moment I realized what a magnificent setting we had actually landed in. It is being there that makes these experiences for human beings so extraordinarily meaningful.

"We were in a valley deeper than the Grand Canyon. Some mountains on either side were going up 6- to-7,000 feet. They were brilliantly illuminated by a sun as bright as any New Mexico sun I can ever imagine. The shadows were as black as one could ever imagine, both in the craters and behind the rocks. The sky was absolutely black in spite of this brilliant sun. And of course, hanging over the southwestern mountain that we called the South Massif, there was this beautiful planet Earth in about a two-thirds phase. Unless I can take you there and show it to you, there's no way that I can describe it so that you could share in that experience."

Cernan and Schmitt also agree that what humans learned about themselves from the inside was as important as the perspectives we were able to apply to ourselves from that location so removed from human experience. It may have been the end of the Apollo Program, but the dedication of the thousands who made it possible because they didn't know they couldn't never faltered.

"Many of those thousands lost their jobs when we lifted off, for all intents and purposes," Schmitt remembers. "The dedication that made Apollo possible carried right through the last mission. It wasn't $16 billion in those year dollars that made Apollo possible, $22 billion if you count up everything. It was these 16-hour days, 8-day weeks that everybody felt they should, but wanted to work, because they believed what they were doing was the most important thing they would do with their lives."

"These are truly unsung heroes, the men and women of the space program who were just like us," Cernan says. "Look at the guys on the lunar module on Apollo 17 at Grumman. They had their pink slips before we launched. They knew they were working out of a job. By God, those guys said 'This is going to be the best LEM that ever flew,' and it was. I'm convinced they left us a little message that I read almost every time we went in and out of the spacecraft that said 'God speed the crew of Apollo 17.' "

While the glimpse inward—both at humankind's infinitesimal place in the cosmos and the grandeur of its ability to accomplish when determined—lives large for Apollo today, so too lives a sense of sadness and disappointment about what might have been, tempered by a sense of hope for what might yet be.

"We were really focused on the mission and didn't have a great deal of luxury to worry that it was the last one," remembers Schmitt. "The first time I began to think about that in any serious way, other than regret, was after we had rendezvoused with Ron (Evans) and were closing out the lunar module. We were interrupted, if I remember the sequence correctly, at that point with Jim Fletcher reading President Nixon's statement to us, which included words to the effect that we would be the last to visit the moon this century. I remember that upsetting me greatly, one because I thought it was an unnecessary remark even if true, and two, I hoped that we would prove him wrong."

"I would say it's the damnedest disappointment I think I've ever had. It was almost with a state of sorrow that we lifted off for that last time with the crew from the surface. When we brought that LEM up it was almost a time of mourning," says Gene Kranz, who along with Gerry Griffin and Neil Hutchinson, was an Apollo 17 flight director.

"I think we had the capability with the Apollo system to establish at a minimum a Little America-type base that we could visit periodically using that same technology," says Schmitt, who went on to become a senator from New Mexico, and now is at the University of Wisconsin-Madison teaching a course called "Resources from Space." "To have shut down that assembly line right when it had proven itself so remarkably successful was a terrible historical error even though at that time we did not know why it was going to be so very important to maintain a lunar base presence. Of course, 10 years later we rediscovered the energy resources that are represented both in the soils of the moon relative to the solar wind Helium 3, and of course the surface of the moon that others have proposed as a location for solar energy collectors. The history of the West, the history of humankind in general should have told us that having opened up a new geographic province such as the moon, it would prove to have value far beyond anything that we could anticipate at that time."

Griffin, who is starting work on his fourth movie as a technical adviser including "Apollo 13" and chairing the board of public company headquartered in California, says NASA needs to be patient and ready for when it is called upon to reach out for interplanetary goals once again.

"It was with mixed emotions when we got to the end," Griffin says. "On one hand we had this great team in place and we had done six landings, seven of them if we had made Apollo 13. All the hardware was working great. We were getting great science. On the other hand, it was time to get on with the rest of the American space program. If all we were going to do was explore the moon, I believe we would have run out of gas on the political front pretty fast.

"We'll have to wait until we've got more things in line both politically and technologically that we just don't have today," predicts Griffin, who served as JSC director a decade ago. "Let's face it, the lunar program had a certain amount of space race with the Soviets involved with it. We don't have that threat right now. I don't think we can 'generate' the energy we had in the Apollo by just deciding that's what we're going to do—and I'm talking about the space community. When you look at the Apollo program, a number of things got into synch. We had a balanced budget, essentially. We had good political leadership that was bold, ready to react. We had a threat. The technology was in place or at least was on the drawing board. You can't force those things to happen.

"What the space program of today has got to do is try to be ready—and I think the agency is but it is very difficult—I think they've got to be ready so that when the factors get into alignment again where something like Apollo can happen, we've got to be ready to take advantage of it. It is a challenge to keep the team in place to the degree we can with the assets like the Johnson Space Center and others, and keep the facilities right and keep the interest of the young people that we seem to be able to do so far to keep them coming into the agency and then be ready when these things get into alignment so that we can either go back to the moon or on to Mars or wherever. I don't know how long it will be before we leave this planet again, but I think you can measure it in a few decades rather than a few years."

In their silver anniversary analysis of the legacy of the Apollo Program, two men who went to the moon on Apollo 17 and two men who led the flight control teams that helped get them there and back safely agree that it is greater than the sum of its technological, scientific and philosophical parts. It is, at long last, a matter of the human heart.

"The legacy is understanding the commitment that people were able to make," says Cernan. "Understanding their dedication to do something that a lot of people thought couldn't be done. Their willingness to accept a challenge knowing that there was no guarantee of success. Their willingness to accept a challenge that had national pride at stake as well as a timetable. This was not just one jump up the rung of the ladder. Apollo was a monumental discontinuity in history. We went along with Mercury, seeing people could fly in space. Then all of a sudden, to me it's like the President reached out to the 21st Century, grabbed a decade of time, slipped it into the '60s and '70s, and called it Apollo." ❑